

The REVIEW of ARCHAEOLOGY

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Linguistics

Language and Prehistory

By Jens Elmegård Rasmussen and

Fabrice Cavoto

(University of Copenhagen)

Indo-European and its Closest Relatives. The Eurasiatic Language Family: vol. I (2000) Joseph H. Greenberg. Stanford University Press, Stanford. x + 317 pp.

It will take up too much space to describe the credentials of Joseph Greenberg who has done pioneering classificatory work on practically all of the world's languages. Since no one can be an expert on all the many languages and language groups treated by Greenberg—although in the case of many he definitely is—Greenberg's oeuvre is perhaps more than anything a grand-scale test of the validity of the state of the art of all the many fields and subfields on which his theories and conclusions are based. Far from all relevant languages are equipped with ideal tools of study in the shape of clear and adequate grammars, etymological dictionaries and easy-to-consult treatises of their phonological and grammatical history. A well-studied linguistic subfield ought to be ready for the comparative handling to which Greenberg subjects them all; some are fully prepared for such an undertaking, others are currently just getting there, while some will perhaps not be "Greenberg-ripe" for quite some time. Born in 1915, Greenberg cannot wait for Utopia to materialize, but has wisely chosen to act now. One can only be grateful that he has taken up the challenge on a basis which he would undoubtedly himself have wished to be better in many parts.

A large-scale comparison comprising the Eurasiatic segment of "Nostratic" is by definition still a pioneering work. The study of Nostratic, long since out of its infancy, may be said to be now in its teens, struggling with the question of which of two promising identities it will have when it finally grows up. Future will show whether etymologies deriving Indo-European *b, *d, *g (with the variants *ġ and *gʷ) from Nostratic plain *p, *t, *k (thus Illič-Svityč and his followers) or those departing from glottalized *p', *t', *k' (the position defended by Bomhard) will carry the day, or perhaps some reconciliation of the two schools will prove possible. Since there are numerous lexemes that do not involve the controversial parts of the phonological system, one will have to acknowledge that enough within the Nostratic relationship looks so sound that it would be foolish not to follow the lead.

The methods used by Greenberg in his big comparisons have been criticized on several occasions. The reviewers can only say, So what? Were Rask's, Grimm's and Bopp's methods any better when they did the groundbreaking work that founded what has since been hallowed as the model for all comparative linguistics to follow? In many respects Greenberg's new book resembles Bopp's classic *Conjugationssystem* of 1816 which to many is simply the birth certificate of Indo-European studies. Like Greenberg now, Bopp was not at all concerned with sophisticated phonetic laws, but contented himself with superficial similarity between the forms of the languages he compared. And since the naked eye can see the underlying identity of the 1st, 2nd and 3rd plural

endings of Persian *bar-īm*, *-īd*, *-and* 'take' and those of Gothic *sokjam*, *sokēiþ*, *sokjand* 'seek' quoted by Bopp 1816:117 who does not even bother to mention the manifestly supporting endings of Greek and Latin, the Indo-European relationship was never in doubt. Likewise one may quote Finnish 1pl *-mme*, 2pl *-tte* along with the basic personal markers *m, *t, *s corresponding to Lat. *me*, *te*, *se* as definite proof that the comparison of Uralic with Indo-European, regardless of the details of phonetic correspondence rules, is based on more than wishful thinking. The same markers turn up as Eskimo-Aleut *m, *t, *c, and the intervening Chukotian group also has /m/, /t/ for 1st and 2nd person. It is precisely the aim of Greenberg's new book to add the morphological support to the etymologies already suggested. As with Indo-European this work, if successful, will be decisive, since, while perhaps any specific lexematic unit can be borrowed from one language to another, obvious correspondences in the material used for purely grammatical purposes are extremely unlikely to reflect anything other than straightforward relatedness, i.e. the situation that all the languages concerned are in effect simple descendants of a single ancestor. It is the firm impression of the reviewers that the only defensible conclusion is a positive one.

One of the most tenacious controversies pertaining to the idea of a Eurasiatic subgroup within the Nostratic relationship concerns the position, indeed the very existence, of Altaic. Here the testimony of comparative morphology is surprisingly clear: In view of the existence of a 1st person marker /m/ ~ /b/ and a 2nd person /t/ (whence in places /s/, /č/, /š/) in Turkic and Mongolian which bring to mind IE *m, *s, pl. *me, *te, combined with, e.g., Turkic interrogative /k/ for persons and /m/ for things which are hard to separate from Hungarian *kí* 'who', *mi* 'what', there can hardly be any doubt that these languages do indeed belong to Nostratic. And if the m/b alternation in the 1st person marker covers Turkic, Mongolian and Tungusic there can be no serious doubt that they form a special branch within Nostratic. In Greenberg's words, "the chance of an irregular alternation *bi/men* arising independently three times is infinitesimal" (14). Note that this will be no less true if the interchange is found to be regular after all.

Greenberg's new book is thus not so much concerned with Indo-European which often plays only a minor part, as with its "Closest Relatives", the basic topic being the unity and delimitation of Eurasiatic. This is taken to consist of: Etruscan, Indo-European, Uralic and Yukaghir, Altaic with Korean and Japanese, Ainu, Gilyak, Chukotian, and Eskimo-Aleut. The attention given to Etruscan is expectedly small, and the author hesitates as to its status as either a separate branch of Eurasiatic or as "a third member of Indo-European, alongside of Anatolian and Indo-European proper" (23). Thus, the basic message of the first chapter, "The Historical Background" (1-23), is that an Altaic node is real, while the other branches are separate units of the large Eurasiatic subgroup of Nostratic of which the non-Eurasiatic members are Kartvelian, Afroasiatic and Elamo-Dravidian. Some hesitation is expressed concerning the position of Kartvelian which, judging by the taxonomic chart of Bomhard 1996:22, seems to be more closely related to EA than the other outside branches, so that it is in effect a matter of definition whether one wants to include it or not. The specific arguments are left for the following chapters, the relatively short "Some Aspects of the Comparative Phonology of Eurasiatic" (24-60), and the majestic and central Chapter 3 "Grammatical Evidence for Eurasiatic" (61-240). An

elaborate appendix treats Ainu vowel alternations (241-78), and a conclusion offers a survey "Classification of Eurasian Languages" (279-82), to which are added references and indices.

The phonological section is the weak part of the fortress. Its main concerns are alternations between stop and nasal and within the vowel system.

The nasal/non-nasal alternation of Eskimo-Aleut is tentatively compared with similar phenomena in Uralic and Chukotian. Thus, for Uralic, the 2nd person marker is *-n* in Ziryene and Ob-Ugric in some parts of the verbal system, but *-d/-t* in others, and also Samoyed (Nganasan and Nenets) has 2sg *-n* in word-final position (alternating with medial *-r-*, conceivably from **-t-*). This is highly reminiscent of the Eskimo-Aleut nasalization of word-final stops (Alaskan WEsk. *aṇun* 'man', erg. *aṇut̃-m*, Alaskan EEsk. *aṇun*, erg. *aṇut̃-m*), while the governing rule for Chukchi is the reverse, *ʔt* 'thee': *ʔn-ə-k* 'in thee'. Erroneously, the author interprets the original Eskimo situation as one of nasalization in close juncture, which is indeed found in many dialects, but only as a shallow rule of sandhi (as the author describes at great length). It is plain that this is no firm basis for genetic conclusions.

The section about IE vocalism is totally unacceptable to the reviewers. In the author's view alternations of height *i/e*, *u/o* are typical indications of earlier vowel harmony. Since such alternations can be cited from some of the other branches of EA, viz. Chukchi, Korean and Gilyak, and allegedly tie in well with the living vowel harmony of Uralic and Altaic, the author claims his broader perspective confirmed by the existence in individual IE languages of some odd instances of vowel variation which he projects back beyond the IE protolanguage all the way to a common Nostratic vowel alternation. In each instance, a more "local" explanation is belittled as ad hoc or even reflecting fear to face the facts. To the reviewers, such weak spots in the phonological histories of the IE languages are still superior to statements that blatantly violate well-established rules as the author's suggestions mostly do. In fact, it is often not hard to explain the troublesome forms as due to quite natural changes of a more recent date. Thus, for OCS *iz*, Lith. *iš* vs. Lat. *ex* (34f), it may be noted that Balto-Slavic **iz* is the antonym of **in* (Lith. *ĩ*) and so may have taken over its vowel by a commonplace analogy, much as Slav. **vь* 'in' took that of **ud* (> OCS *vy* 'out'). Gk. *νύξ* 'night', as opposed to Lat. *nox* etc., is quite regular from **nok̑-t-s* by "Cowgill's rule" (seen also in *ὄνυξ* 'nail' from **h₃nóg^{wh}-s*). Gk. dial. *ιστία* vs. *ἑστία* is a simple spontaneous assimilation, while OCS *večera* 'yesterday': *večern* 'evening' and the alternate form *četyre* vs. *četyre* 'four' are mere allegro reductions. The same may go for Gk. *πίσυρες* for normal *τέσσαρες* 'four', but since the Gk. reflex of "schwa secundum" is /i/ (*πίτυρημι* 'I expand' from **p₂t-ná-b₂-mi*), one may derive all variants from an old paradigm **k^wét-uor-es*, loc. **k^wét-u₂sú* (the latter with **-tu₂* > Gk. *-σ*). True, "the theory of schwa secundum is now generally abandoned" (36), but by mistake, for Schindler 1977 irrefutably shows it to be the regular appearance of zero in the environment **T₁TR* (i.e., between two initial plosive consonants followed by a nonsyllabic sonorant). An example like Skt. *śiras*: Avest. *sarab* 'head' is pitiful, since both represent Indo-Ir. **ōras* from older **k₂r-Hos*, a (repaired) zero-grade variant of Gk. *κέρας*, this being normal ablaut *e/zero* with no IE /i/ involved. The same goes for Avest. *-cina* 'at all' which is identical with Skt. *cana*, not an old alternant of it. Sanskrit *sima* vs. *sama* is so isolated that an ad-hoc explana-

tion is called for: analogy with *-ar/-ir-* from **erH-/*rH-* (Renou 1952:28) or root **sh₂em-/*sə₂m-* (FC)? The Skt. variation *śákvān-/*śikvān-* 'clever, able' may be spurious; along with *śikvas-* 'id.' they may represent a refashioning of the perfect ptc. active, i.e. structurally **kē-kē-uos-/*kī-kē-us-* with the alternation *e/i* restricted to the reduplicatory syllable (cf. the meaning 'be able' of the perfect of *śak-* in the R̥gveda). There is no need to posit an IE **is-mi* alongside **h₂és-mi* to account for some Slavic reductions (37) any more than English *I'm* demands a vowel-less protoform; nor is the /i/ supported by OCS *istb* 'true' which may be identical with Lat. *jūstus*; and Gk. *ἴσθι* 'be' is well enough explained from **h₂i-s-d^hi* by the susceptibility of /h₁/ to umlaut in Greek discovered by Hamp 1978 (seen also, e.g., in *ὄδοντ* 'tooth' from **h₂d-ont-*). The author's insistence on /is/ as an erratic alternant of /es/ allows him to revive the old identification of the segment **-is-* of Lat. forms like *amāv-is-ti*, *amāv-er-am* with the verb 'be' and even extend it to the Skt. *iṣ-*aorist which, in his opinion, "cannot have *i* from schwa because this would correspond to *a* elsewhere, which, as we have seen, it does not". Yet, in the Celtic *s-*preterit in **-ass-* (with a strong sibilant stemming from the 3sg in **-a-s-t-*), it does just that, the type being in origin simply the *s-*aorist of set-roots from where it has been generalized in Celtic. The Latin /-is-/ is still a problem; for a suggestion (reanalysis of the *s-*aorist of long-diphthong roots, **TeH₂* ⇒ **TéH₂-m ~ *TéH₂i-s-m*) cf. Rasmussen 1989:46. It is also hard to grasp the meaning of 'be' in the alleged Gk. *"ewéid-e(s)a"* 'I knew'; an analysis of the IE pluperfect of **uej₂d-* as a regular preterite of **uóid₂-h₂a* 'I know' will be given in Rasmussen forthcoming.

Some of the author's *i/e* instances, however, do appear to be acceptable: the anaphoric acc. **im*, gen. **ésio*, and the indefinite **k^wis* are clearly reduced forms of a stem **e/o-* and **k^we-/*k^wo-* resp., the governing rule being one of accent, cf. esp. Skt. *kás-cit* 'whoever' and other examples assembled in Rasmussen 1988/99. As explained there, the rule applies only to the "thematic vowel" and to the vowel of reduplications, as in **d^hi-d^heb₂-ti*, 3pl **d^hé-d^heb₂-ti* 'put'.

Apart from such instances, the IE vocalism alternates according to rules that find no support in the external material adduced by the author. But then again, why should it? No one would expect a prestige of PIE to contain alternations matching the Germanic umlaut phenomena or the Latin word-internal vowel reductions which are obviously of a much later date; and the whole—or most—of IE ablaut may also be younger than the separation from the Nostratic or Eurasianic protolanguage.

The external evidence presented to date shows nothing corresponding to the IE rules of vowel change which can then only be inferred by internal reconstruction from IE itself. Most of them are quite transparent and do not call to mind any notion of vowel harmony: (1) An unaccented short vowel is lost (**h₂és-t-i* 'is', 3pl **h₂és-ént-i*, both with topical particle **-i* not participating in the ablaut proper); (2) word-final *-s* (older **-z*) of nominatives and **h₂* of collectives produce lengthening on preceding VC(C)-, cf. **h₂néz-z* > **h₂néz-z*, by PIE simplified to **h₂néz*, Gk. *άνήρ* 'man'; (3) on its way to zero, unstressed **e* passed through an *o*-like stage, wherefore lengthening of unstressed **-e* yields **ō*, cf. **sue-sōr* > Lat. *soror* 'sister'; (4) the acrostatic ("Narten") ablaut *é/é* is regular from underlyingly long root vowel, to which one need add only a rule of initial accent (PIE **stéu-/stéu-* of Ved. *stáu₂i*, mid. *stáve* from *stu-* 'invoke', pre-IE **stéu-/stéu-*, the latter alternant developed via **steu₂-* >

**stéu-*, the "initial accent rule" operating vacuously in other words because unstressed short vowels have already been lost, forms like gen. **pə₂-tr-ós* 'father's', 3pl **g^{mh}-ént+i* 'kill' and even dat. **k^w-turb^hiós* 'four' being in fact accented on their first full vowel); (5) additional lengthening of *ē* produced *ō* (nom. **péd-z* > **pód-s* 'foot'), probably via trimoric /e:/ pronounced in two syllables [é.e] one of which was unaccented and so became [o], whereupon [é.o] was contracted to a long o-vowel; (6) stems in clusters shortened the lengthened vowel of the nom.sg., cf. **nók^w-ts* 'night' vs. **pód-s*. An account of these basic rules is given in Rasmussen 1978/99.

Special rules apply to certain varieties of IE /o/: (7) the "thematic vowel" (i.e. a vowel in stem-final position) alternates *e/o*, the form being /o/ before a voiced segment, /e/ elsewhere, cf. verbal endings in *-om, *-es, *-et, *-ont, or pronouns in *-od, *-oi, and the telling common form of ipv. and voc. *-e; the only exception is the nom.sg. in *-os which may be accounted for by assuming earlier voiced *-z for the lengthening nom. marker as opposed to voiceless *-s of the non-lengthening 2sg marker of verbs; (8) the *ó*/zero of some reduplicated verbal categories (e.g. the perfect) must be simple dissimilation, **k^we-k^wór-* being ultimately based on **k^wer-k^wer-*; (9) an "infixal o" must be assumed for causatives, the word-type *toga* and derivatives like Gk. *πόπνη*, the forms coming out regular only in case an extra element *-Q- (a consonant that changes to *o* after the working of the ablaut rules) is inserted into the root segment, cf. Rasmussen 1992 for arguments.

Of this only the thematic vowel and the infixal -o- have any chance of turning up in external evidence. The two may be ultimately identical, but that is for future analysis to decide.

As claimed by Illič-Svityč the overwhelming frequency of underlying /c/ in the IE vocalism must be due to merger of a more varied older picture preserved in Uralic and Altaic. However, a yet unpublished study by Cavoto shows that Uralic and Altaic do not demand seven original vowels, but share a system of four basic vowel phonemes, viz. *a*, *ā*, *u/o*, *i/e*, and that the opposition *a* : *ā* dissolves when the forms are projected back into the Nostratic protolanguage for which a threefold system *a/ā*, *u/o*, *i/e* suffices, all variation being ascribable to the adjacent consonants.

The central chapter 3 presents 72 grammatical items as evidence for EA. The trouble with grammatical markers and pronominal stems is that they are very short and often of somewhat vague functional identity, this making the danger of fortuitous resemblances very great. Thus, some of the entries have little or no persuasive power, while others make up small sets that seem hard to dismiss.

Unable to comment on all, we call attention to a number of specific items which may be of general interest (the numbers are those of Greenberg's sections):

1-2. First-person *m* vs. *k* of Uralic with much the same distribution as IE **m* vs. **b₂*, i.e. with *m* as a more active or ergative-like marker as opposed to an inactive velar, the difference being restricted to the singular. Comparably, Eskimo-Aleut has 1sg **k* opposed to a labial in the dual and plural, although the facts given are somewhat inadequate in showing this: Thus, the Esk. ergative 1sg -*ma* is quoted as representing 1st person **m-*, while the Aleut form -*miŋ* shows that the person marker is really **k*, whence word-final *-ŋ, so that Esk. -*ma* is in fact from older **m-ŋa*, i.e. ergative marker **m-* + 1sg *-ŋ < **k* + an optional particle not present in the Aleut form. Note also

the difference in the 1pl possessive, inergative **-put*, which is somehow from **-B-δ* with a labial (< **m-*?) of 1st person + plural *-δ, hardened by general rule to stop *-t in word-final position, contrasted with the ergative counterpart **-mta* from ergative **m-* + 1st pers. *-B- + plural *-t < *-δ, again with word-final treatment before the particle -a. With fewer preceding consonants there is word-internal treatment in the 1sg inerg. possessive in Esk. -*ka* (Aleut without the particle -ŋ). The Esk.-Al. Auslautgesetze changing underlying stops into nasals, and spirants into stops, are all but given in Swadesh 1952:168 and have been discussed at some length in Rasmussen 1979 (curiously, they are not mentioned in the survey of Eskimo phonological rules given in the introduction to Fortescue & al. 1994). Altaic also has 1st person *m*, retained word-internally as in Turk. -*miz* 'our', and changed into *b* when word-initial (Turk. *biz* 'we'), except when the word contains a second nasal, as **min* 'I' (Uzbek *men*, Mod.Turk. analogical *bin*). We suggest this formulation as superior to the traditional explanation of *b* > *m* by assimilation which the author rightly dismisses.

4-5. Second person *t* seems inescapable, but the alternative *s* looks more than anything like an original conditioned variant. Thus, in IE, the variation 2sg *-s : 2pl *-te and 2sg pronoun **tu*, **te* can be paralleled, e.g., by **nēmos* 'reverence' : **nēmeto-s* 'holy' and other cases of an interchange *(*-t*/**-s*) collected in Rasmussen 1994. Likewise for Altaic: if Mong. *či* is derived from **ti* (72), one wonders why *si-* of other Altaic languages cannot be a further development of the same. Surely Eskimo-Aleut 2pl poss. -*ci* must contain a plural marker also; note that a derivation from **-t-δ* would make it parallel with 2du Esk. **-tə*, Al. -*δix* from **-t-γ*; the palatal character of Esk. **δ* (reflected as [sʲ], [ž], [ɹ], [č] and [j] in individual dialects) makes the development to [tʲ] with an auxiliary *i*-vowel fully comprehensible. There thus seems to be no real evidence for the author's Nostratic 2nd person **s*.

7. A pronoun base *ge* or *ga* is suggested to account for the IE pronoun 'I' and the stem nuclei of pronouns like Chukchi *γəm/γət* or Hung. *en-gem/té-ged* 'I/thou' and Eskimo -*mkəŋ* 'I ... thee'. While the rest may look promising, an IE **eĝ(h)om* is supported only by Indo-Iranian (Skt. *abām*), which has an extension -*am* on many other pronouns also (Skt. *tu-ām* 'thou', *ay-ām* 'he'); the combined evidence leads rather to IE *(*b₁*)eĝ. The stem of the Esk.-Al. personal pronouns is found to consist of a dental + velar cluster, perhaps /tʲγ/, cf. for details Rasmussen 1987/99. This makes things far too complicated for a simple equation of **eĝ(h)om* with Kamassian Samoyed *i-gä-m* 'I am'.

8-9. A third-person pronoun *i/e* and a demonstrative stem *a/e* are distinguished on quite shady grounds. If /i/ of IE enclitic **im*, **id* is a regular weakening of the "thematic vowel" *-e/-o-, the *e*-form of the orthotone gen. **ésjo*, dat. **ésmōi* in no way separates it from the second of the two items. As for the vocalism, there appears to be widespread cross-linguistic agreement on front vowels for near deixis as opposed to darker vowel in stems of more distant deixis, cf. Hung. *ez/az* 'this/that', *itt/ott* 'here/there'. There is a very interesting, and possibly significant, resemblance between the Ainu detransitivizing prefix *i-* and the Eskimo suffix quoted as -*i-* (its main variant) of same function; the Eskimo morpheme is found to be ultimately **-δi-* in Rasmussen 1979:71 (thus also, perhaps independently, Fortescue & al. 1994:396), which offers no good support for its being in origin an agglutinated object pronoun.

10. A demonstrative *ku* of unclear deixis (distant in

Gilyak, near in Altaic cum Japanese) is taken to underlie Hitt. *kūn*, the acc.sg. of *kāš* 'this'; however, also *apāš* 'that' has acc. *apūn*, the *u*-form being in all probability simply a reduced form of the vowel influenced by the old **m*, cf., esp., the anaphoric stems *ani*- and *uni*- built on two different forms of the acc.sg. of the enclitic *-a*. No such rounding occurred in Luwian *za-š*, *za-n* which proves an IE palatal like Lith. *ši-s* (whose /i/ is from enclitic use); it should be noted that there is no Hieroglyphic Luwian variant *ī*-, this being simply an antiquated reading for *za*-. The Eskimo 3rd person suffixed pronouns quoted for the "participial mode" in *-lu-yu*, *-lu-yi-k*, *-lu-yi-t* are those of East Eskimo; the full picture indicates PEsk. **-yu*, **-kə-k*, **-kə-t* (thus still in SW Alaska) with the special consonant gradation of original word-final clusters (Rasmussen 1979:33); it is not easy to define the original identity of the elements of the series **-KX*, **-KX-γ*, **-KX-δ* thus pointed to (metathesis of the pronoun stem /tʃ/? [JER]), but it is no evidence for an old vowel alternation *u/i*.

11. A demonstrative **tV* seems inescapable and represents a classical item in distant comparison. The nom.sg. masc. **so*, fem. **sab₂* of the IE stem **te/*to*- is traditionally assigned to a different stem; however, given the IE alternation *s/t*, it is not inconceivable that **so* is by dissimilation from older **so-s*, and this in turn by assimilation from regular **to-s* (thus Rasmussen 1994). Forms (with different vowels) are quoted from the entire Eurasian area, Eskimo offering its only prefix, the anaphoric *ta*- (possibly really **taδ*) attached to deictic local expressions. The reported "distance distinction" *tu/to* (far) vs. *ti/te* (near) again has a sound-symbolic feel to it.

12. The alleged demonstrative *s*, dispensable as such for IE, may be properly a reflexive. Its development into a 3rd person pronoun in Uralic (Finn. *bän*) is paralleled at least by the Greek enclitic anaphoric *ē* (vs. orthotone reflexive *ē*) and, for the possessive, by German *sein* and French *son* (also Hitt. *šī-š* 'his'); also the Latin *accusativus cum infinitivo* and the Eskimo use of the reflexive of the recurrent 3rd person open avenues for such a development. The Eskimo reflexive possessive in **ni* acts on a preceding stem like a single consonant and so is underlyingly **c* which with word-final nasalization gave **ñ* and later **ni* (Aleut *-n*); this is proved by the dual **zə-k* (Aleut *-ōix*) from intervocalic **c^oγ* (Rasmussen 1979:37f). The full array *k/m*, *t*, *c* vs. IE **b₂/m*, *t*, *s* constitutes incontrovertible proof of the Nostratic genetic relationship in the classical Neogrammarian sense of the terms.

14-16. Dual in a velar occurs in many places, often accompanied by a plural marked by a dental. The combined weight is considerable, indeed in itself enough to prove the relationship to any unbiased observer. Thus, Uralic pl. *-t* is combined with a du. in *-γ* in Vogul, and in other velars in Ostyak and Samoyed, and the 1st and 2nd pl. of the verb end in **mek*, **tek*. This is remarkably close to the picture of Chukchi which also has pl. *-t* with nouns and verbal endings *-mə-k*, *-tə-k*. It is shockingly close, also, to IE **me*, **te* which disagree with the plural marking of nouns in **s* or **i* (both from **ǵ*), but fully rhyme with the dual type **pə-tér-e* 'two fathers'. It would seem that in the verbal endings, which were properly **γm-γ*, **γt-γ*, **δm-δ*, **δt-δ* (i.e., predicative agent noun with adequate number marking followed by enclitic pronouns with their own number markings, cf. Rasmussen 1987a:100 [1999:267f]), the redundant second number marking was standardized using the form of the dual. This looks very much like a common innovation of IE,

Uralic and Chukotian. The author's presentation is somewhat compromised by his suggestion that the Armenian pl. *-k* (from IE **s*) continues a dual **k*. Mistaken! It's also the assessment of the Sireniki Eskimo plural marker *-j* which is simply the word-final development of **t*; with regular vowel weakening a form like **panat* 'spears' yields **panəj* > Sir. *panij*; this is no *-i* plural" (104) on a par with Lat. *bī*, *bae*, *baec*. A palatal shade of the plural marker is further indicated by the Uralic *-t/-t* alternation (Finn. *talo-t*, inessive *talo-i-ssa* 'in the houses'), even if the rules are not congruent with those for IE **s/*i*.

23. The case for an "absolute *k*" is particularly weak. The term is taken from Eskimo where an inflection **arnaq* 'woman', ergative **arnam*, pl. **arnat* gives the impression of a suffixed *-q* in the non-ergative ("absolute") form. However, the gemination caused on single consonants, as **aluq*, **allum*, **allut* 'footsole', demands an underlying stem ending in a uvular consonant, i.e. **arnar*, **alur* (> PEsk. **q* with normal word-final treatment), also appearing before possessive suffixes, e.g. Chaplino *arnax-si*, *alux-si* 'your (pl.) woman, oar blade' as opposed to *pana-zi* 'your spear'. Due to simplification of geminates in WEsk. and Aleut, the uvular has come to be widely perceived as a semantically empty suffix of erratic occurrence. That there are noun-forming velars in Uralic, Turkic, Chukotian and Gilyak is not so impressive if the common function is as vague as that: And even if Finn. *sade* 'rain' (vb. *sata-*), Altai *tara-k* 'a comb' (vb. *tara-*), Kamchadal *č'ir-uq* 'thief' (*č'ir* 'steal'), Gilyak *asqa-k* 'younger brother' (*asqa* 'be younger'), or some of them, really do contain the same suffix, one wonders how it has come to be perceived by Greenberg as a petrified article.

24. The accusative in *-m* is one of the most striking resemblances between IE and Uralic. One will not like to dismiss it, and equally would one like to find a paradigm for the Esk.-Al. ergative marker which is also **m*. It may be suggested that the two *m*-cases are genetically identical, viz. an original genitive. If the verbal stem is an old agent noun, its object is only expected to be in the genitive (like Eng. *her lover* meaning 'the one who loves her'). The reinterpretation of the genitival complement of the agent noun as a direct object would then be a most interesting innovation common to IE and Uralic.

40. The curious resemblance between the synonymous Turkic *-li* and Eskimo *-lək* 'having -', pointed out as coincidental by Menovščikov 1962:103, is expanded to include the possessive adjective of Lydian, e.g. (ntr.) *mane-li-d* 'that of Mane-š', and the Common Anatolian pronominal genitive in *-l* as Hitt. *ammēl* 'of me'. However, there can be little doubt that Lydian *-li* is simply based on the latter, just like the Luwian poss. adj. in *-āšš-i* is based on the gen. case-ending seen in Hitt. *-āš* (IE **os*). The original locus of the *l*-genitive is probably precisely the 1sg pronoun: The IE possessive pronouns were derived by **vǵddhi* (i.e., vowel insertion + thematization) from the stems of the personal pronouns, e.g. **tue* 'thee' => **teuó-s* 'thy'; with 'me', however, the original form **mué* was regularly simplified to **mé* so that, in this case, a **vǵddhi* vowel had to be prefixed, the result being IE **emó-s* 'my'; endless forms of the possessive adjectives were used as genitive case-forms of the pronouns (with initial accent, i.e. probably substantivized), e.g. **téue* 'of thee'; the corresponding 1sg **éme* apparently took over the initial **m*- from other case-forms like **mé*, this giving **méme* of which the actually reconstructible PIE **méne* (Avestan *mana*, OCS *mene*) must be a dissimilated form. Hitt. *ammēl* will be regular from **emele*, an

obvious dissimilation of *emene, itself a blend of *emós and *méne. This, then, hardly reflects an old possessive *l*-morpheme, nor does *méne itself appear to contain an old genitive *-n-*, even if such a thing may be recoverable from, e.g., Chuvash *bi/minu* 'I/my' and Kamchadal *k'e/k'en* 'who/whose' (no. 25).

43. A passive participle in *-t-*, well-known from IE **to-* (alternating with **no-*), is found also in Uralic and, most clearly, Eskimo. The last distinguishes an active ptc. in **tuq/*-duq* (stem **tur/*-dur-*) and a passive ptc. in **taq/*-daq* (stem **tar/*-dar-*): Greenlandic *neri-soq* 'eating', *neri-saq* 'eaten'. In Rasmussen ms. arguments are given for identification of the active form with the IE action-noun type in plain **t-* (Skt. *īṣu-bbhṛ-t-* 'carrying arrows'), and of the 3rd sg. possessive of the passive form with the IE passive ptc. in **to-*, **b^hṛ-tō-* 'carried' meaning properly 'belonging to the carrying one'. If the active form in **t-* is retained as the 3sg finite verb, its object in **m* may indeed be an old genitive (cf. ad 24).

44. Participle *nt*: The verbal derivative used in the Vogul present periphrasis, e.g. *miñt-ānt-em* 'I am going', is highly reminiscent of the IE active participle, prs. **b^hér-o-nt-s* 'carrying'. However, it is hard to see what is gained by analyzing the IE 3rd plural finite present in **nt-i* as a neuter plural of the participle, just because this is *-nti* in Sanskrit; as the author notes, this is mostly equated with Gk. *φέρωντα* and derived from IE **nt-ō₂*. True, the development of schwa to Skt. /i/ has been attacked by Burrow 1979, but if the arguments had been any good (and we are not aware of any), wouldn't the author have quoted one?

53. A conative *sk* is attempted for the IE inchoative present suffix **-ské/o-* and a Fenno-Ugric companion posited as **-ské-*, the latter being functionally mostly a frequentative, but also conative. It should of course not be suppressed that the IE suffix is also mostly iterative, but that shade appears to adhere originally to the accompanying reduplication (Gk. *διδάσκω* 'teach', i.e. begin to teach again and again, teach little by little); but reduplication may disappear (as it has in the Hittite iterative *sk*-verbs). Given the general shortness of suffixes, the palatality of the FU sibilant and the IE velar attracts attention and makes this equation look better than most.

60-62. Interrogatives have *k*, *j*, *m*. In IE and Uralic, the *j*-forms have become relative (IE **iō-s* 'he who'), a most remarkable common innovation duly pointed out by the author (225).

Adding the existence of a fourth interrogative marker, viz. *n* (no. 64), there is some possibility that the entire system of interrogatives has very deep roots combining it with that of other pronouns: Is it a pure coincidence that the 1st, 2nd and 3rd person markers are *m/k*, *t/n*, *s/V*, and the demonstrative stem nuclei may also be posited as *m/k*, *t/n*, *s/V* on a scale of falling proximity, and even the interrogatives exhibit *m/k* and *n*? Could it be that the persons were simply marked by morphemes indicating the degree of closeness to the speaker? And, finally, is it possible that the interrogatives are simply demonstratives used in questions, perhaps on an adequate tone, of the type "(and) this one?", meaning "who is he?" —? What is the chance that the three sets would just happen to display, in full or in part, a variation employing the same alternants, albeit not by common rules? [FC]

The final main chapter on Ainu vowel alternations is beyond the scope of this review. We only note that the author finds support for a "northern Asiatic connection" in the facts he has adduced, esp. the morphemes of dual

k(i) and plural *t(i)* which are persuasively characterized as decisive and diagnostic.

A concluding chart summarizes the results as giving eight main subfamilies of Eurasiatic: Etruscan, IE, Uralic-Yukaghir, Altaic, Korean-Japanese-Ainu, Gilyak, Chukotian, and Eskimo-Aleut. Miller 1996 supplies very impressive additional arguments for the inclusion of Korean and Japanese into Altaic under a strict Neogrammarian concept of genetic relationship. Thus, it is highly possible, indeed expected, that future research will simplify the taxonomic picture of this distant relationship which, despite all reservations forced upon us by rigorous methods, simply must contain a substantial nucleus of truth. It may not be superfluous to note that there are no real alternative explanations for the observed correspondences: No variety of trade contact will bring whole sets of grammatical markers from one language into another and leave the bulk of the lexicon alone - that simply is not the way people of different language background communicate. Nor is there any reason that the lines of genetic relationship that have certainly been proved valid for later periods, should not extend back into the more distant past. In fact quite on the contrary: it takes a certain degree of mobility to exchange linguistic material with a neighboring population, and, as we go back in time, the possibilities for such secondary exchange gradually diminish leaving, before some as yet undefined point in time, good old genetic relatedness as the only solution allowed by sheer logic.

To the Indo-Europeanist, Greenberg's book is of importance in that it assembles so many indications of a common origin of the whole of his Eurasiatic that it places IE in a wider context from which there appears to be no escape. The book does not supply the phonetic laws to prove the correspondences regular, but in view of the sheer size of the evidence this is of secondary importance. By definition, pioneering work cannot be perfect, but this one certainly constitutes a goldmine in which future researchers will find material for fruitful further investigations. What remains is of course continued sifting according to the rigorous standards of the comparative method which alone can show which impressionistic comparisons will stand the test of time. That a handsome number will already be beyond question.

The message to the prehistorian is perhaps not for the reviewers to grasp, but at least it shows that, whatever may be the extent of language mixture in the vast linguistic continuum ranging from the Atlantic to the Pacific and through Arctic America, there is a considerable common core of very old elements that date back to a time when all of the languages here concerned were one. Since the only unforced explanation of this picture is prehistoric migration, the book implicitly invites archaeologists to contribute to an interdisciplinary clarification of a very large segment of man's prehistory in the Northern hemisphere. □

Abbreviations of languages: Al. = Aleut; EA = Eurasiatic; EEsk. = East Eskimo (Inuit); Esk. = Eskimo; Esk.-Al. = Eskimo-Aleut; Finn. = Finnish; FU = Finno-Ugric; Gk. = Greek; Hitt. = Hittite; Hung. = Hungarian; IE = Indo-European; Lat. = Latin; Lith. = Lithuanian; OCS = Old Church Slavonic; PEsk. = Proto-Eskimo; PIE = Proto-Indo-European; Sir. = Sireniki Eskimo; Skt. = Sanskrit; Turk. = Turkish; WEsk. = West Eskimo (Yuk).

The sigilla FC and JER are used to mark suggestions for which only one of the reviewers is responsible.

REFERENCES CITED:

- Bomhard, Allan R. 1996. *Indo-European and the Nostratic Hypothesis*. Charleston, South Carolina: Signum.
- Bopp, Franz. 1816. *Über das Conjugationssystem der Sanskritsprache in Vergleichung mit jenem der griechischen, lateinischen, persischen und germanischen Sprache*. Herausgegeben und mit Vorerinnerungen begleitet von Karl Joseph Windischmann. Frankfurt am Main, in der andreaischen Buchhandlung. Reprint 1975, Hildesheim - New York: Georg Olms.
- Burrow, T. *The Problem of Shwa in Sanskrit*. Oxford: Clarendon Press.
- Fortescue & al. 1994 = Michael Fortescue, Steven Jacobson & Lawrence Kaplan, *Comparative Eskimo Dictionary. With Aleut cognates*. Fairbanks: Alaska Native Language Center.
- Hamp, Eric P. 1978. On Greek "prothetic" vowels. *Münchener Studien zur Sprachwissenschaft* 37, 59-64.
- Menovščikov, G.A. 1962. *Jazyk aziatskix eskimosov*, čast' 1. Moskva - Leningrad: Akademija Nauk SSSR.
- Miller, Roy Andrew. 1996. *Languages and History: Japanese, Korean, and Altaic*. Oslo: Instituttet for sammenlignende kulturforskning.
- Rasmussen, Jens Elmegård. 1978. Zur Morphophonemik des Urindogermanischen. Die Erklärung qualitativer, quantitativer und akzentueller Alternationen durch vorurindogermanische Lautgesetze. In: B.Čop (Hrsg.), *Collectanea Indoeuropaea I*, Ljubljana: Univerza, pp. 59-143. Reprinted in Rasmussen 1999:1-66.
- Rasmussen, Jens Elmegård. 1979. *Anaptyxis, Gemination, and Syncope in Eskimo. A diachronic study*. Copenhagen: The Linguistic Circle of Copenhagen.
- Rasmussen, Jens Elmegård. 1987. *Zur Typologie der Eskimosprachen. Arbejdsrapporter udsendt af Institut for Lingvistik, Københavns Universitet (APILKU)* 6, 1987, 157-79. Reprinted in Rasmussen 1999:665-93.
- Rasmussen, Jens Elmegård. 1987a. The constituent elements of the Indo-European personal pronouns. *APILKU* 6, 1987, 89-112. Reprinted in Rasmussen 1999:256-75.
- Rasmussen, Jens Elmegård. 1988. Indo-European ablaut *-i- ~ -e/-o-*. *APILKU* 7, 1988, 125-42. Reprinted in Rasmussen 1999:312-26.
- Rasmussen, Jens Elmegård. 1989. *Studien zur Morphemphonemik der indogermanischen Grundsprache*. Innsbruck: Institut für Sprachwissenschaft.
- Rasmussen, Jens Elmegård. 1992. One type of o-grade: a consonantal root infix? In: R. Beekes, A. Lubotsky & J. Weitenberg (Hrsgg.), *Rekonstruktion und Relative Chronologie. Akten der VIII. Fachtagung der Indogermanischen Gesellschaft*, Leiden, 31. August - 4. September 1987. Innsbruck: Institut für Sprachwissenschaft, 335-57.
- Rasmussen, Jens Elmegård. 1994. Ablaut zwischen Konsonanten: Die Quellen von idg. /s/. In: G. Dunkel & al. (Hrsgg.), *Früh-, Mittel-, Spätindogermanisch. Akten der IX. Fachtagung der Indogermanischen Gesellschaft* vom 5. bis 9. Oktober in Zürich. Wiesbaden: Reichert, 325-36.
- Rasmussen, Jens Elmegård. 1999. *Selected Papers on Indo-European Linguistics. With a Section on Comparative Eskimo*. Copenhagen: Museum Tusculanum Press.
- Rasmussen, Jens Elmegård. Forthcoming. Zur Vorgeschichte des Plusquamperfekts. To appear in: *Akten des Kolloquiums "Indoarisch - Iranisch - Indogermanisch" der Idg.Gs. im Okt. 1997 in Erlangen*.
- Rasmussen, Jens Elmegård. Manuscript. The Growth of IE Ablaut: Contrastive Accent and Vřddhi. Paper read at the XI. Annual UCLA Indo-European Conference, Los Angeles 1999.
- Renou, Louis. 1952. *Grammaire de la langue védique*. Lyon - Paris: IAC.
- Schindler, Jochem. 1977. A thorny problem. *Die Sprache* 23, 25-35.
- Swadesh, Morris. 1952. Unaliq and Proto Eskimo IV: Diachronic notes. *International Journal of American Linguistics* 18, 166-71.

Fabrice Cavoto
Badstuestræde 4, 2. sal
DK-1209 København K, Denmark
fabcav@adr.dk

Jens Elmegård Rasmussen
Ørstedesvej 8
DK-4600 Køge, Denmark
jer@cpbling.dk